II. THE IP-ENABLED "APPLICATIONS LAYER."

As the *Notice* suggests, the relatively low barriers to entry and the existence of multiple providers of VoIP and other IP-enabled services at the retail applications layer strongly counsel against economic regulation of those developing services. Regulation of entry and access and other charges for service would increase regulatory uncertainty and unduly burden service development. As long as regulation adequately protects against the abuse of market power in the *network* layer, and ensures that market power arising as the result of control over facilities cannot be translated into unfair advantage or market power at the *applications* level, the competitive conditions surrounding IP applications should generally be adequate to protect consumers without the need for economic regulation.

Appropriate regulatory safeguards for the network layer are discussed in Section III of these comments. If adequate protects are in place, application of the Commission's existing regulatory classifications should largely suffice to achieve appropriate outcomes for the applications layer.

The NPRM asks for comment on the need for separate classification and regulation of different types of customer premises equipment, IP-enabled services, and associated applications. Rather than attempt to craft economic regulation in light of particular service characteristics or to pick and choose among emerging services, the Commission already has the tools available to it to craft an appropriately deregulatory regime without arbitrary lines drawn among services: the information services regime should ensure the proper level of regulation in almost all cases. As AT&T's retail and business IP-enabled offerings show, most VoIP and other IP-enabled services offer the capability for net protocol conversion and include other enhancements beyond bare transmission that place them squarely within the information services

classification. However, where the Commission identifies VoIP services that do not squarely fit within the information services regulatory classification, and a telecommunications service classification would otherwise produce unnecessarily stringent regulatory outcomes, the Commission has broad authority to avoid that result – through forbearance, interpretation, waiver or rulemaking. The application of legacy access charges, in particular, should be avoided regardless of the regulatory classification of particular VoIP services.

Social regulation presents different issues. The Commission (and state commissions) have an interest in seeing that VoIP services ultimately respond to legitimate consumer protection concerns that, for traditional telephone services, have led to regulation of 911 services, access for persons with disabilities, and other consumer protection requirements. Mechanical application of those requirements – requirements that were developed for circuit-switched based networks – to VoIP services, however, risks stunting development of new and important services, features and functionalities. Optimal development of VoIP and other IP-enabled services requires that regulation for social concerns be tailored to the distinct technological characteristics of VoIP services, and that some aspects of the regulation be phased in over reasonable transition periods.

A. Economic Regulation Of The Applications Layer Is Generally Unnecessary, But Intercarrier Compensation Reform And An Immediate Access Charge Exemption For All VoIP Services Are Urgently Needed.

The Commission requested comments on whether "economic" regulations that currently apply to telecommunications services should be applied to IP-enabled services. *Notice* ¶ 73. The answer is straight-forward: economic regulation is appropriate only for services where the supplier can exercise market power, by "rais[ing] prices by restricting its own output (which usually requires a large market share)" or "increasing its rivals' costs or by restricting its rivals' output through the carrier's control of an essential input, such as access to bottleneck facilities,

that its rivals need to offer their services." *Regulatory Treatment of LEC Provision of Interexchange* Services, 12 FCC Rcd. 15756 ¶ 83 (1997) ("*LEC Classification Order*"); *see also ITTA Forbearance Petition*, 14 FCC Rcd. 10816, ¶ 7 (1999). Here, the preconditions for monopoly at the applications "layer" are generally absent. So long as the Commission appropriately regulates the underlying facilities needed to provide IP applications, *see infra* Part III, there is every reason to expect that multiple carriers will vigorously compete to offer consumers a wide array of VoIP and other IP-enabled applications. This intense competition should ensure that rates and terms for these services are just, reasonable and nondiscriminatory. To facilitate this competition, however, the Commission must act quickly to complete its intercarrier compensation reform proceeding, and it should not apply legacy access charges to any VoIP services in the interim.

The Commission already has the regulatory authority for appropriately light-handed regulation of the applications layer. Nearly all of the relevant IP-enabled applications at issue in this proceeding should fit within the established category of "information service," which has an appropriately reduced level of regulation of entry conditions, charges, and other economic regulation.

Section 3(20) of the Communications Act, 47 U.S.C. § 153(20), provides that an "information service" is the "offering of a capability for generating, acquiring, storing, transforming, processing, retrieving, utilizing, or making available information via telecommunications." The Commission's rules further provide that any service "which employ[s] computer processing applications that act on the format, content, code, protocol or similar aspects of the subscriber's transmitted information, provide the subscriber additional, different, or restructured information, . . . or involve subscriber interaction with stored

information," 47 C.F.R. § 64.702(a), are "enhanced" and therefore "information" services. *See Non-Accounting Safeguards Order*, 11 FCC Rcd. 21905, ¶ 102 (1996) (statutory category of "information services" is broader than "enhanced services" but includes everything previously deemed to be enhanced services); *Federal-State Joint Board on Universal Service*, Report to Congress, 13 FCC Rcd. 11501, ¶ 33 (1998) ("*Report to Congress*") (same).

AT&T's residential and enterprise VoIP offerings are plainly "information services" within the meaning of section 3(20). For example, AT&T CallVantage service is analogous in all relevant respects to the pulver.com service that the Commission recently found to be an information service. Memorandum Opinion and Order, *Petition for Declaratory Ruling that Pulver.com's Free World Dialup is Neither Telecommunications Nor a Telecommunications Service*, WC Docket No. 03-45, FCC 04-27, ¶ 11 (rel. Feb. 19, 2004) ("*Pulver.com Order*"). Like pulver.com, the AT&T CallVantage service offering is a "bring your own broadband" service. *See Pulver.com Order* ¶ 9. AT&T CallVantage service end-users, like pulver.com's, use their own end-user devices (their computers and telephone adapters) to "establish the actual connection" with others through their pre-existing connection to the Internet. *Id.* ¶ 6. Like pulver.com, AT&T CallVantage service facilitates connections to others who are connected to the Internet (so-called "computer-to-computer" communications), and it provides numerous data storage features that allow its end-users to manage these communications. As described above, AT&T CallVantage service provides subscribers a "Personal Call Manager Web Site," which gives subscribers "complete control of all . . . features. At a glance, [you, as a subscriber] can check your voice mail or change any of your settings instantly."[3] Similarly, AT&T CallVantage service includes a "Personal Call Manager" that allows the subscriber to call in and access and

[3] http://www.usa.att.com/callvantage/what/management.jsp.

manipulate a number of service features.[4] AT&T CallVantage service also includes a novel new service that allows customers to check their voice mail from their computer and to "make this information available" to others by giving subscribers the ability to forward this information as a "talking" e-mail.[5] *See Pulver.com Order* ¶ 11 (finding a similar capability was an "information service"); *see also* Declaratory Ruling and Notice of Proposed Rulemaking, *Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities*, 17 FCC Rcd. 4798, ¶ 38 (2002) ("*Cable Modem Declaratory Order*") (providing e-mail capability as part of broadband Internet access service is the offering of an "information service"). The fact that AT&T may provide these information services in part "via" its own "telecommunications" (*i.e.*, over its own IP backbone facilities) does make them any less an information service.

AT&T CallVantage service provides additional information services, of course, that pulver.com does not provide. Most prominently, AT&T CallVantage service provides additional protocol conversion services that allow its end-users to establish communications with others who are still connected to the PSTN. VoIP customers use CPE that originates voice communications in IP format at the point they enter the network. To allow these subscribers to communicate with telephone subscribers that are connected to the PSTN using traditional wireline facilities, AT&T's service includes "computer processing applications" that convert the customer's IP-based communications to the traditional analog format of POTS services.[6] Likewise, when a non-VoIP, circuit-switched POTS customer calls an AT&T VoIP subscriber

[4] http://www.usa.att.com/callvantage/what/management.jsp.

[5] http://www.usa.att.com/callvantage/what/features.jsp.

[6] Specifically, when a VoIP customer calls a POTS customer, an AT&T server will direct the IP packets to a media gateway which converts the packets into a traditional analog voice call.

(whether enterprise or residential), AT&T converts the call to IP format.[7] The Commission has repeatedly recognized that services that include such net protocol conversions are "information services." *Non-Accounting Safeguards Order* ¶ 104; *BOC Joint Petition for Waiver of Computer II Rules*, 10 FCC Rcd. 13758, ¶ 51 (1995); *Computer III Phase II Order*, 2 FCC Rcd. 3072, ¶¶ 64-71 (1987).[8]

Even if all of this were not the case, the fact that some minority of calls may not involve protocol conversion (*e.g.*, an AT&T VoIP customer calls another AT&T VoIP customer) does not transform AT&T's residential and enterprise services into something other than information services. Section 3(20) provides that a service is an information service so long as it "*offer[s]* . . . [the] *capability* for generating, acquiring, storing, transforming, processing, utilizing, or making available information via telecommunications." (emphasis added). Thus, the Act does not require that "generating, acquiring, storing, transforming, [and] processing" of information be performed each and every time a subscriber uses the service, but only that the "capability" for such "generating, acquiring, storing, transforming, [and] processing" be "offered."

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[7] Telephone numbers for AT&T CallVantage service subscribers need not be associated with the rate center of the customer's service address. An analog voice call to such a phone number is carried to the AT&T node where the local number is assigned. The AT&T node associates the call with the subscriber's IP address. The call is converted to IP format, and is carried over the public Internet to the customer's telephone adapter, wherever it may be physically located.

[8] In that regard, the New York Public Service Commission's recent holding that VoIP services do not involve a net protocol conversion is simply incorrect. *See Complaint of Frontier Telephone of Rochester, Inc. Against Vonage Holdings Corporation*, Case 03-C-1285, Order Establishing Balanced Regulatory Framework for Vonage Holdings Corporation (NYPSC, May 21, 2004). The VoIP end user sends information to the network in IP format, and VoIP providers perform only one protocol conversion (IP to TDM). When assessing whether there has been a net protocol conversion, the Commission has consistently looked at the "outputs of the *network*." *See, e.g., Communications Protocols under Section 64.702 of the Commission's Rules and Regulations*, 95 F.C.C.2d 584, 590 (1983) (emphasis added). Customer premises equipment has never been considered part of a provider's network for these purposes. *See also Pulver.com Order* ¶¶ 11-12.

The Commission has likewise repeatedly made clear that when a "comprehensive service offering" includes such data processing capabilities, it is an "information service," "regardless of whether subscribers use all of the [information service] functions provided as part of the service." *Cable Modem Declaratory Order* ¶ 38; *id.* ¶ 35 (statutory definition of information service "rests on the function that is *made available*") (emphasis added). Likewise, in the *Report to Congress*, the Commission made clear that "[i]f the user can receive nothing more than pure transmission, the service is a telecommunication service. If the user *can receive* enhanced functionality, such as manipulation of information and interaction with stored data, the service is an information service." *Report to Congress* ¶ 59 (emphasis added); *see also id.* ¶ 58 ("[a]n offering that constitutes a single service from the end user's standpoint" is not a basic telecommunications service "simply by virtue of the fact that it involves telecommunications components"). Here, all of AT&T VoIP residential and enterprise subscribers "can receive enhanced functionality" – *i.e.*, protocol conversion capabilities.

The fact that these services are information services also means that legacy access charges do not and should not apply to these services. In this regard, the emergence of VoIP services dramatically underscores the urgent need for the Commission to complete intercarrier compensation reform as quickly as possible and to move to a rational system in which all traffic is exchanged under the same compensation rules. The Commission has already raised these issues in the pending intercarrier compensation rulemaking, and some in the industry continue to work to achieve an industry consensus on these issues. It is critically important that the Commission take interim steps – including a ruling in this proceeding that all VoIP services, regardless of regulatory classification, are exempt from legacy access charges – that will provide Verizon, BellSouth and other incumbent LECs with appropriate incentives to reach consensus

with other carriers (rather than continuing to drag their feet to preserve their access charge bonanzas).

The access charge system has long outlived its usefulness and now – especially in an era in which the RBOCs have full interLATA authority under § 271 – it serves only as an anticompetitive source of monopoly profits and potential price squeezes. Comprehensive reform will not occur immediately, but under *no* circumstances should the Commission require any VoIP providers to pay traditional access charges, pending completion of intercarrier compensation reform. *See Notice* ¶ 61 (seeking comment on the "extent to which access charges should apply to VoIP"). The imposition of above-cost legacy access charges would radically alter the economics of providing VoIP services and would severely impede the development of those services.

As explained above, most IP-enabled services (including AT&T's VoIP offerings) are information services. Under the Commission's rules, only interexchange carriers providing interstate or foreign "telecommunications services" are obligated to pay interstate "carrier's carrier charges," or access charges.[9] Information service providers (including VoIP providers) are not obligated to pay access charges, and indeed, such services would fall within the Commission's ESP exemption.[10] Because these services fall outside the Commission's access charge rules, VoIP providers typically purchase PRIs or other local business lines to connect to the PSTN and pay the terminating LEC pursuant to § 251(b)(5) negotiated or arbitrated interconnection agreement compensation such as reciprocal compensation. Thus, contrary to the

[9] 47 C.F.R. § 69.5(b) ("Carrier's carrier charges shall be computed and assessed upon all interexchange carriers that use local facilities for the provision of interstate of foreign telecommunications services").

[10] *See, e.g., Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Intercarrier Compensation for ISP-Bound Traffic*, CC Docket No. 96-98, 99-68, Order

Bells' claims, VoIP services that do not pay access charges do not receive a "free ride." The Commission should make crystal clear in this proceeding that VoIP providers can continue to pay enhanced service rates such as reciprocal compensation pending more comprehensive intercarrier compensation reform.

Moreover, the Commission should, in this proceeding, affirmatively exempt *all* VoIP services from access charges, whether or not they might otherwise be subject to access charges under current rules. There is no conceivable public interest basis for foisting economically irrational access charges, which are a relic of the legacy monopoly circuit-switched networks – and which no longer make any sense even in that environment – on new IP-enabled services. For two decades, the Commission has consistently refused to require information service providers to pay access charges, because it has always recognized that the "access charge system contains non-cost-based rates and inefficient rate structures," and "[m]aintaining the existing pricing structure for these services avoids disrupting the still-evolving information services industry."[11] That is especially true today for IP-enabled services, because any obligation to pay bloated access charges would deal a crippling blow to the development of these services.

Exempting all VoIP services from access charges is also necessary to ensure that different VoIP services are not subjected to differing access charges based solely on the vagaries of classifications like "telecommunications service" and "information service." There is no sound basis for applying differing regulatory treatment to different types of IP-based services,

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on Remand and Report and Order, 16 FCC Rcd. 9151 (2001) ("*ISP-Bound Traffic Order*").

[11] First Report and Order, *Access Charge Reform, et al.*, 12 FCC Rcd. 15982, ¶¶ 344-45 (1997) ("*Access Reform Order*"). *See also id.* ¶ 344 ("[w]e think it possible that had access charges applied to ISPs over the last 14 years, the pace of development of the Internet and other services would not have been so rapid"); *Pulver.com Order* ¶ 19 (permitting Pulver to offer its IP-based service free of any access charges "will facilitate the further development of [that service] and

which would merely subject IP-enabled services to the same regulatory distortions that apply to today's circuit-switched services, in which some carriers pay either cost-based reciprocal compensation or exchange traffic pursuant to a bill and keep mechanism, while others pay bloated access charges, for the same functions. The Commission should not pick winners and losers among different types of VoIP providers by applying access charges to some but not all services. Many providers of IP-enabled voice services are preparing to introduce a wide range of different offerings that may potentially fall into one or another regulatory category. The Commission should allow the market – not disparate regulatory treatment – to determine which of these services provide the most efficient and useful new applications and innovations.

Likewise, the Commission should not pick winners and losers between VoIP providers and traditional LECs. Whatever the historical wisdom of requiring interexchange carriers to subsidize through inflated access charges local exchange carriers that operated in a different market, it makes no sense to require VoIP providers to subsidize the very local exchange carriers against whom they will be directly competing.

The Commission should thus make clear that this access charge exemption extends both to "computer-to-phone" and "phone-to-phone" VoIP services. With respect to "computer-to-phone" VoIP services that originates or terminates on the PSTN, there is no practical way to apply the legacy access charge regime. In particular, there are no practical billing practices or signaling methods in place to identify whether traffic coming from the Internet is local, intrastate toll, or interstate toll. The historical presumption that telephone numbers indicated the fixed geographic point from which calls originated is no longer reliable. Any attempt to force VoIP providers to pay access charges would be discriminatory and would impede the development of

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Internet applications like it and these offerings, in turn, will encourage more consumers to

such services, because VoIP providers would inevitably be forced to pay access charges on traffic that is in fact local. Applying the access charge regime to the PSTN end of VoIP calls would also impede the development of a number of nomadic features of VoIP, such as the "Locate Me" feature of the AT&T CallVantage service. Customers will not want to use the Locate Me feature if VoIP providers are required to pay legacy access charges whenever a customer designates a PSTN number as the number where the customer can be located. And allowing incumbents to collect access charges from VoIP providers would do nothing to protect the incumbents' access revenues or to maintain any sort of regulatory parity; to the contrary, applying the access charge would only hasten the migration of services away from the PSTN and toward IP-enabled networks on both ends of calls. The Commission must fix intercarrier compensation, rather than burdening VoIP providers with access charges.[12]

Although the Commission issued a declaratory order holding that its existing rules require the payment of interstate access charges on certain phone-to-phone VoIP services on a going-forward basis, the Commission made clear that it adopted this holding only "to provide clarity to the industry . . . pending the outcome of the comprehensive *IP-Enabled Services* rulemaking proceeding," and that "[w]e in no way intend to preclude the Commission from adopting a different approach when it resolves the *IP-Enabled Services* rulemaking proceeding or the *Intercarrier Compensation* rulemaking proceeding." *Petition for Declaratory Ruling that AT&T's Phone-to-Phone IP Telephony Services are Exempt from Access Charges*, WC Docket

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demand broadband service").

[12] To the extent that the Commission believes that its current rules require some or all VoIP providers to pay access charges, and it is not willing to use its rulemaking authority to exempt all such services, then it should forbear from applying access charges to those services. Level 3 has already sought forbearance from access charge rules for the VoIP services at issue here (which would include AT&T's VoIP offerings), and the Commission is required to act on that petition by December 2004.

No. 02-361, Order, ¶ 2 (released Apr. 21, 2004). Loading legacy access charges onto this subcategory of VoIP services creates substantial disincentives to build out IP backbone networks and to upgrade them with new capabilities that are necessary to the future development of *all* IP-enabled services. And, equally important, assuring ILECs that they are guaranteed a continuation of an artificially inflated access revenue stream so long as they require interconnecting carriers to terminate traffic in TDM format provides a perverse disincentive to the ILECs *not* to upgrade local networks to IP and *not* to participate in intercarrier compensation reform efforts.

The *Notice* (¶ 61) states that "[a]s a policy matter, we believe that any service provider that sends traffic to the PSTN should be subject to similar compensation obligations, irrespective" of where the traffic originated. That is an appropriate guidepost for the comprehensive intercarrier compensation regime that must supplant the current, broken regime – all traffic should be subject to the same compensation rules. But it is not descriptive of the current patchwork of regulations under which LECs charge different prices for the same uses of the network based on entirely arbitrary categories, and it most certainly is not a basis for imposing access charges on VoIP services because they use the PSTN in the same way as ordinary POTS services. In this regard, VoIP services use the network in the same way as information services as well, and thus the same policy would support exempting all VoIP services from access charges. The problem is the access charge regime, not VoIP, and the Commission should fix only that which is broken. Rather than impeding the development of VoIP by saddling such services with the bloated and outdated access charge regime, the advent of VoIP dramatically underscores the urgent need for the Commission to complete

comprehensive intercarrier compensation reform. In no event, however, should the Commission extend that outdated system to VOIP services, either temporarily or permanently.

Finally, the Bells' frequent contention that the ESP exemption applies only when an enhanced service provider is communicating with its own customers is simply incorrect. Enhanced service providers are defined as "end users" for purposes of the access charge rules. 47 C.F.R. § 69.2(m). "End users" are entitled to purchase local business lines (which includes payment of end-user interstate access charges, such as the Subscriber Line Charge). 47 C.F.R. § 69.5(a).[13] Accordingly, ESPs always have the option of purchasing local retail services just like other end users, whenever such services can be practically used to provide access. The Commission has *never* held that the ESP exemption is subject to any other limitation (except, of course, the general prohibition on treating like services differently).[14] The Bells' claim to the contrary rests almost entirely on a stray comment in the *Access Reform Order*, in which the Commission noted that enhanced service providers use the local network "to receive calls from their customers."[15] In context, that offhand phrasing did not even purport to be a legal statement of when the ESP exemption applies.[16] To the contrary, two paragraphs earlier in the same order the Commission *did* describe the scope of the ESP exemption, and it stated without qualification that "[i]n [1983], the Commission decided that, although information service providers (ISPs)

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[13] In this regard, the short-hand term "ESP exemption" is something of a misnomer, because the rules are not phrased in terms of an exemption; rather, the rules define ESPs as end-users, who are then subject only to the general rules governing end-users.

[14] *Northwestern Bell Petition for Declaratory Ruling*, Memorandum Opinion and Order, 2 FCC Rcd. 5986 (1987) ("*Talking Yellow Pages Order*").

[15] *Access Charge Reform, et al.*, CC Docket Nos. 96-262 *et al.*, First Report and Order ¶ 343 (1997) ("*Access Reform Order*").

[16] The full sentence, contained in a background section, is "[w]e explained [in the *Access Reform NPRM*] that ISPs should not be subjected to an interstate regulatory system designed for circuit-switched interexchange voice telephony solely because ISPs use incumbent LEC networks to

may use incumbent LEC facilities to originate *and terminate* interstate calls, ISPs should not be required to pay interstate access charges." *Access Reform Order* ¶ 341 (emphasis added); *see also Amendments of Part 69 of the Commission's Rules Relating to Enhanced Service Providers*, CC Docket No. 87-215, Notice of Proposed Rulemaking, 2 FCC Rcd. 4305, ¶ 2 (1987) (Commission had "initially intended to impose interstate access charges on enhanced service providers for the use of local exchange facilities to originate *and terminate* their interstate offerings" (emphasis added)).

B. The Commission Should Establish Regulations to Protect Consumers' Social Interests.

As consumers migrate to IP-enabled services in large numbers, it is reasonable and desirable for the Commission to continue regulatory oversight of beneficial social services such as E911 and access for individuals with disabilities. At the same time, the Commission should be careful not to sacrifice important benefits or limit new features of VoIP services by trying to force the "square" peg of VoIP into "round" legacy holes. Reconciling these two equally important goals will take time and creativity. Accordingly, the Commission must allow a reasonable transition to give manufacturers, service providers, and others sufficient time to design and implement the necessary adjustments. Optimal development of VoIP services requires that regulation for social concerns be tailored to the distinct technological characteristics of VoIP services, allow for design of industry standards and recognize that this requires phasing-in regulation over a reasonable transition period. With respect to upgrading and IP-enabling the nation's 911 answering system, mechanical application of legacy rules will stifle the very innovation that may better serve the policy goals.

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receive calls from their customers." *Access Reform Order* ¶ 343.

1. The Commission Should Ensure VoIP Providers Can Provide 911 and E911 Services After A Transition Period.

The *Notice* reaffirms the Commission's broad authority to impose public safety requirements on interstate wire communications (*Notice* ¶ 53), and asks whether that authority should be used to impose "basic" and "enhanced" 911 requirements on IP-enabled services. *Id.* ¶¶ 53-57. These public safety capabilities are an important and beneficial part of the communications system, and IP-enabled voice services ultimately should include them. The Commission should recognize, however, that a transition period will be necessary before it imposes any such requirements, because IP networks and VoIP technology cannot currently support 911 or E911 in many circumstances.

As the *Notice* recognizes (¶ 51), 911 and E911 capabilities were developed decades ago for traditional wireline communications, with a monopoly provider and an end-user tethered to a specific geographic location. As a result, the nation's 6,500 local Public Safety Answering Points ("PSAPs") reflect a bewildering patchwork of arrangements with incumbent wireline carriers. PSAPs often have extremely limited funding from state governments, and many PSAPs operate today with equipment and other arrangements that are outmoded even by the standards of traditional wireline telephony (much less IP-enabled telephony).

Notwithstanding these limitations, AT&T entered into an agreement with Intrado to enable 911 dialed calls by AT&T CallVantage service customers to be completed to PSAPs. Under AT&T's arrangement with Intrado, Intrado has established a process for geocoding the service address provided by the VoIP end-user so that it corresponds to a public safety answering point for the geographic location specified by the caller. When the caller dials 911, AT&T interfaces with Intrado's geocoding database for the PSAP 10 digit number and then routes the call to the PSAP. This arrangement allows AT&T to complete 911 dialed calls. As long as the

customer is using her telephone adapter at the location she has designated (usually her home), the call will complete to a geographically appropriate PSAP. Since the calls are not completed via 911 trunks, however, the customer location indicator information is not available to the PSAP.[17] AT&T's IP-based services in the enterprise market, such as IP Centrex, will also provide basic 911 functionality, using AT&T's own network capabilities to route 911 calls to the PSAP associated with the IP user's customary location.[18]

This interim approach builds on the broader agreement between a coalition of VoIP providers (the Voice over the Internet, or "VON," Coalition) and the National Emergency Numbering Association ("NENA") on principles governing the provision of 911 service by VoIP providers. Specifically, in December 2003, the parties agreed that VoIP providers would provide 911 emergency services (routing to a PSAP 10-digit number) to VoIP customers (using phones that have functionality and appearance comparable to conventional telephones) within 3 to 6 months of offering VoIP in the jurisdiction. The agreement further specifies that upon entering markets, the VoIP provider is to contact the PSAP to inform it of the approach it will take to providing 911 access. *See Notice* ¶ 56 & n.163.

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[17] Current technology allows Intrado to assign only a single geographic location to the VoIP end user's number. The end-user can notify the VoIP provider that the telephone adapter is being moved to a new location, but it takes several days for Intrado to make such a change in its database. Thus, if an end-user takes the telephone adapter to another location for an extended period, the change can be reflected in Intrado's database. Because of the lead-time necessary to make changes in Intrado's database, changes to the 911 service address for short-term or unplanned nomadic use of the telephone adapter is impractical to accommodate.

[18] The 911 capabilities presently available for AT&T's IP offerings to the enterprise market are similarly tied to the IP address associated with the caller's normal office location, and do not have the ability to immediately recognize a change in location, such as when an end user connects her IP-enabled CPE into a network connection at another office location, making short term or nomadic use of the service impossible to accommodate for 911 purposes with present technology.

More extensive 911 capabilities for VoIP services which would accommodate enhanced 911 capabilities for nomadic use are technically infeasible today, both for AT&T's residential and enterprise IP offerings. AT&T and other industry members, however, are working hard to develop more comprehensive solutions that will allow users to have access to a fuller set of 911 capabilities, comparable (or even superior) to enhanced 911 in the context of traditional telephony. As part of the VON Coalition, AT&T is working with NENA and others to develop standards and procedures for implementing an enhanced 911 capability for VoIP services. As a result, multiple vendors are already competing to propose industry solutions to the VoIP E911 challenge. Indeed, IP technology promises to allow PSAPs and service providers to offer 911 capabilities that go well beyond the capabilities in the traditional wireline network. Importantly, these advances should enable individuals to reach 911 emergency services from whatever peripheral device they are using – including Blackberries and text messaging devices. Not only will this serve mobile end-users, it will increase 911 accessibility to the deaf, hard of hearing, and speech impaired. Furthermore, the integration of voice and data applications through VoIP promises to provide first responders with important real time data regarding the individual who placed a 911 call, or even details regarding the physical location from which such a call originated (*e.g.*, floor plans).

To realize these benefits, however, the entire industry – service providers, manufacturers, and PSAPs – must work together to overcome a number of substantial obstacles. For example, the inherently nomadic nature of IP-enabled services requires the industry to invent an entirely new solution for enhanced (and even some basic) 911 services. One of the principal benefits of IP-enabled services is that one can take one's telephone adapter anywhere, and use one's own VoIP service wherever one can find a broadband connection. Because Internet addresses have

no geographic location, however, the network has no way of knowing where a caller is physically located. No company can solve this problem alone. As originally implemented, 911 was designed for one monopoly provider network pre-divestiture. However, in a competitive environment, the solution must come from the industry as a whole, working with manufacturers, to develop a standardized means of signaling a caller's physical location (a "dynamic ALI"). Moreover, that solution must be designed to work across a wide variety of types of networks (*e.g.*, cable, wireline, wireless, etc.).

Even more importantly, however, PSAPs must update their systems to bring them into the era of IP-enabled services. The industry and manufacturers, working together, will likely develop technologies, devices and standards over the next few years that would enable providers to offer a wide array of enhanced 911 features in conjunction with IP-enabled services. These advances will be meaningless, however, unless PSAPs upgrade their own equipment so that they can interpret enhanced 911 data from IP networks. This is likely to be a gargantuan undertaking for the PSAPs, who chronically face limited funding and, as noted, often operate with outdated equipment even by pre-IP standards. The advent of IP-enabled services promises far more effective enhanced 911 features than exist today, but only if PSAPs can accomplish substantial upgrades in their own equipment.[19]

Overcoming all of these obstacles will take time. Therefore, while the Commission should ensure that 911 and E911 capabilities are available in conjunction with IP-enabled voice services and have the vision to accommodate IP enabled text and other information services, the Commission should recognize that a period of transition will be necessary before these

[19] *See Notice* ¶ 53 ("[w]e recognize, too, that IP-enabled services may enhance the capabilities of PSAPs and first responders – and thus promote public safety – by providing information that cannot be conveyed by non-IP-enabled systems"). Congress is currently considering legislation

capabilities can become a reality. As the Commission correctly recognizes (*Notice* ¶ 53), "we are mindful that development and deployment of these services is in its early stages, that these services are fast-changing and likely to evolve in ways that we cannot anticipate, and that imposition of regulatory mandates, particularly those that impose technical mandates, should be undertaken with caution." Consistent with that recognition, the Commission should acknowledge that industry coalitions are working diligently to find an industrywide solution, and as the industry develops a specific solution, the Commission should oversee that process and work with all parties, including state commissions, to ensure that a cohesive, standardized process can be implemented on a nationwide basis.[20]

2. The Commission Should Require IP-Enabled Voice Products and Services To Implement "Readily Achievable" Disability Measures In Accordance With Section 255.

To ensure that individuals with disabilities have maximum access to IP-enabled voice services, the Commission should extend its § 255 disability rules to IP-enabled voice services,

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that would provide funding for PSAPs to make E911-related upgrades.

[20] In its *E911 Scope Order*, the Commission identified four criteria for determining whether to require E911 regulation: (1) whether the entity offers two-way switched voice service that is interconnected with the PSTN; (2) whether customers have a reasonable expectation of E911; (3) whether the service competes with traditional voice service; and (4) whether it is technically feasible to provide E911. Report and Order and Second Further Notice of Proposed Rulemaking, *Revision of the Commission's Rules to Ensure Compatability With Enhanced 911 Emergency Calling Systems, et. al,* 18 FCC Rcd. 25340, ¶¶ 18-19 (2003) ("*E911 Scope Order*"). While VoIP services satisfy the first and third factors, and may satisfy the second as well, E911 is simply not technically feasible for VoIP services at this time. Accordingly, under Commission precedent, the Commission could not impose an E911 requirement on VoIP services absent a reasonable transition to allow the industry to develop a technically feasible means of providing E911. The situation today with VoIP services is much like the situation with wireless services in the early 1990s, when a technically feasible means of providing E911 was conceivable but not yet a reality; there, the Commission required wireless carriers to provide E911 but only after a substantial, multi-year transition period. *See Revision of the Commission's Rules to Ensure Compatibility with Enhanced 911 Emergency Calling Systems*, Report and Order and Further Notice of Proposed Rulemaking, 11 FCC Rcd. 18676 (1996).

but defer any extension of the requirements to IP-enabled advanced features. AT&T has long been at the forefront of ensuring that its telecommunications services are accessible to individuals with disabilities, and it is now at the forefront of making VoIP services accessible as well. To make sure the entire industry – manufacturers and service providers – are sufficiently focused on developing accessibility measures, the Commission should extend to VoIP providers the general § 255 mandate to implement "readily achievable" measures.

Section 255 and the Commission's implementing rules establish a simple set of requirements. Section 255(b) requires a "manufacturer of telecommunications equipment and customer premises equipment" to ensure that its products are accessible to and usable by persons with disabilities, if "readily achievable." Section 255(c) requires a "provider of telecommunications service" to ensure that its services are accessible to and usable by persons with disabilities, if "readily achievable." The term "readily achievable," taken from the Americans with Disabilities Act, means "easily accomplishable and able to be carried out without much difficulty and expense," and requires a case-by-case analysis of several factors, including the cost and nature of the action and the resources available to the entity.[21] If such access is not "readily achievable," the equipment or service must be made "compatible" with peripherals or specialized CPE commonly used to allow access for persons with disabilities. 47 U.S.C. § 255(d). The Commission has held that each manufacturer and service provider must review the accessibility of its products and services at each "natural opportunity" to do so.[22]

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[21] *See generally Implementation of Sections 255 and 251(a)(2) of the Communications Act of 1934, as Enacted by the Telecommunications Act of 1996*, WT Docket No. 96-198, Report and Order and Further Notice of Inquiry, 16 FCC Rcd. 6417, ¶¶ 43-70 (1999) ("*Disability Access Order*").

[22] The Commission has held that such natural opportunities could include "the re-design of a product model, upgrades of services, significant rebundling or unbundling of product and service packages, or any other modifications to a product or service that require the manufacturer or

Under these rules, manufacturers and service providers are under a continuing obligation to evaluate the accessibility of their products and services. In the context of traditional telephony, manufacturers and service providers, including AT&T, have introduced a number of "readily achievable" measures to make the telephone network more accessible, for example AT&T's regular services include such features as Braille billing and TTY access to customer care and billing representatives. In addition, two of AT&T's first IP-enabled services were IP Relay and Video Relay, which allow hearing impaired users to access Telecommunications Relay Services ("TRS") through the Internet rather than through TTY teletypewriters. As the Commission has found, these IP-enabled TRS services provide significant benefits that traditional TTY devices could not offer.[23] Video Relay even allows users to sign their communications, rather than typing them as with traditional TTY devices.

Section 255, by its terms, imposes requirements only on manufacturers and providers of telecommunications services, not on information service providers. The Commission has recognized, however, that it has authority to impose the same accessibility requirements on information services under its ancillary Title I jurisdiction. In 1999, the Commission "assert[ed] ancillary jurisdiction to extend these accessibility requirements to the providers of voice mail and interactive menu services and to the manufacturers of the equipment that perform these functions." *Disability Access Order* ¶ 93. The Commission found that it had subject matter jurisdiction over the communications at issue under Title I (§§ 1-3) and that voice mail and

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service provider to substantially re-design the product or service." *Disability Access Order* ¶ 71.

[23] *See Provision of Improved Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, Petition for Clarification of WorldCom, Inc.*, CC Docket No. 98-67, Declaratory Ruling and Second Further Notice of Proposed Rulemaking, 17 FCC Rcd. 7779, ¶¶ 7-9, 26 (2002).

interactive menu services were "reasonably ancillary" to § 255's statutory obligations. *Id.* ¶¶ 94-106.

The Commission should use its Title I authority to require IP-enabled voice services to comply with the general standards that the Commission has adopted under § 255. The Commission's authority over information services is "well settled," *Computer and Communications Indus. Ass'n* v. *FCC*, 693 F.2d 198, 213 (D.C. Cir. 1982), and the Commission has used that ancillary authority to adopt many rules similar in scope, including structural separation requirements and comparably efficient interconnection regulations. For VoIP services, marketplace pressures alone will not always ensure that all "readily achievable" measures to provide access are made available. A Commission mandate, applicable to both manufacturers and service providers, would be appropriate, to make sure that the entire industry remains focused on continually evaluating whether new accessibility measures are "readily achievable."

More specific mandates, however, are unnecessary now. As the Commission has noted, "[t]he readily achievable obligation imposed by section 255 is both prospective and continuing." *Disability Access Order* ¶ 71. Under that standard, manufacturers and service providers are under a constant duty to assess at any "natural opportunity" whether new measures are readily achievable and can be implemented. The advent of IP-enabled voice services has already made possible a number of new accessibility measures that give persons with disabilities better access to the telephone network in some respects than was ever possible in traditional telephony.[24] Moreover, although TTY devices are currently incompatible with VoIP services, because the current methods for packet loss compensation in VoIP services render the TTY signals

[24] *See, e.g.*, "How VoIP Can Connect the Disabled," Business Week (Apr. 28, 2004).

unrecognizable, the Commission can reasonably expect manufacturers to solve this technical problem in the relatively near future such that readily achievable measures can be implemented. Indeed, as VoIP technology continues to improve, it is reasonable to expect that a wide variety of new accessibility measures will become "readily achievable" for the first time, and that IP-enabled voice services will permit greater accessibility than ever before. *See Notice* ¶ 59 ("current or future IP-enabled services may facilitate communications by individuals with disabilities more effectively than traditional technologies"). The Commission, moreover, can monitor these developments over time and mandate more specific measures if that becomes necessary. To encourage those innovations in this nascent market, however, the Commission should apply the general mandate to implement readily achievable measures, but it should not at this time adopt more specific mandates that may artificially limit the creativity and opportunities for manufacturers and service providers.[25]

3. The Commission Should Reform Its Outdated Universal Service Program.

The *Notice* seeks comment "on how the regulatory classification of IP-enabled services . . . would affect the Commission's ability to fund universal service." *Id.* ¶ 63. This question is inextricably linked to the issues the Commission has already raised in its proceeding on reform of the universal service contribution system. AT&T and others have proposed a contribution system in that proceeding that would replace the current revenues-based system with a numbers/capacity-based system that is fairer and more sustainable. AT&T's proposal would require VoIP providers to contribute to the Commission's universal service support mechanisms

[25] For example, as readily achievable measures are implemented, the Commission should consider the N11 dialing challenges and related relay reimbursement funding issues of forwarding 711 dialed calls to appropriate state relay centers for virtual number and nomadic users of IP services.

(regardless of whether they are considered telecommunications carriers or information service providers). The Commission should adopt that system as soon as possible.

As the Commission and virtually the entire industry recognize, the current USF is in a "death spiral." The fund's obligations continue to grow; the Wireline Competition Bureau has estimated that the size of the fund will grow 16% between 2003 and 2007.[26] At the same time, the contribution base, which is based on interstate telecommunications service revenues, is shrinking rapidly, as consumers increasingly migrate to services that have reduced contribution requirements (such as wireless long distance calling) or no contribution requirements at all. The current system is unsustainable, and complete reform is urgently needed.

In the *Contribution Reform* proceeding, AT&T has offered a comprehensive proposal to replace the current revenues-based system with a new system in which contributions are based on numbers or special access capacity. Under this system, there would be a flat-rated charge, assessed against the provider, for each assigned telephone number that maps to a unique end-user's service. Special access services would also be assessed a flat-rated charge based on the capacity of the service. As AT&T has shown in detail elsewhere, this system is stable and sustainable going forward.[27] A numbers/capacity-based system would provide a solid foundation for the fund because the use of numbers is increasing. Moreover, VoIP providers would be fully included, because experience to date confirms that VoIP services are almost always associated with NANP numbers. This system would be much more equitable than the current system, and it

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[26] *Commission Seeks Comment on Staff Study re Alternative Contribution Methodologies*, Public Notice, FCC 03-31 (Feb. 26, 2003).

[27] *See Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Comments of AT&T Corp. (filed Feb. 28, 2003) ("AT&T Contribution Reform Comments"), and AT&T's *SFNPRM* Reply Comments and Comments on The Staff Study (filed Apr. 18, 2003).

would halt the erosion of the contribution base that is a result of migration to nontraditional services.

The *Notice* asks whether, to the extent IP-enabled services are "information services," the Commission can require non-facilities-based providers to contribute to universal service. *Id.* ¶ 64. The Commission has ample authority to adopt a numbers-based contribution system that would apply to all providers, including IP-related service providers, regardless of the classification of VoIP providers. The Commission has plenary authority over numbers under § 251(e), 47 U.S.C. § 251(e). That authority extends to all providers that use numbers, including telecommunications carriers, information service providers, and even non-facilities-based IP-related providers. Assessing a fee for the use of numbers is clearly within the Commission's plenary authority to administer the numbering plan, because such fees unquestionably serve a useful conservation purpose, especially with the increasing possibility of number exhaust.

Moreover, § 254 permits the Commission to include non-facilities-based VoIP providers in the contribution base, even if they are information service providers. Section 254(d) permits the Commission to extend the contribution base to "providers of interstate telecommunications." Information services, by definition, are provided "via telecommunications." 47 U.S.C. § 153(20). Accordingly, all information services have a telecommunications component, and thus all information service providers are "providers of interstate telecommunications" subject to the Commission's permissive authority within the meaning of the third sentence of § 254(d).[28]

[28] Even if that were not true, the Commission could fill gaps in its § 254 authority by relying on its pre-1996 Act authority to create universal service systems under Title I. Non-facilities-based providers of VoIP services benefit from the ubiquity of the telecommunications network and therefore can equitably be required to pay into the fund to support the universal availability of that network. The D.C. Circuit upheld the Commission's historical, pre-1996 universal service program under § 1 of the Act, *NARUC* v. *FCC*, 737 F.2d 1095, 1108 n.6 (D.C. Cir. 1984), and the Commission could use that authority here to include additional providers in the contribution

The Commission also asks how providers of IP-enabled service could determine the portion of their revenues that "constitute end-user telecommunications services." *Id.* ¶ 64. Under AT&T's numbers/capacity-based system, this inquiry would be irrelevant. Indeed, that is one of the major benefits of AT&T's approach, because the Commission's current method for determining interstate telecommunications revenues within a bundle is unfair, difficult to administer, and should be replaced.[29] In fact, VoIP services, by their nature, would be especially hard hit if the current contribution scheme applied to such services, because it is inherently impossible to track the jurisdictional nature of IP-based communications. For this reason, even if the Commission does not deem VoIP services to be wholly jurisdictionally interstate, VoIP providers could be forced to count the entire service as interstate for universal service purposes, an outcome that would place VoIP services at a competitive disadvantage relative to traditional circuit-switched services and wireless services.[30]

4. The Commission Should Not Extend Other Rules to VoIP.

The Commission also seeks comment on whether it is necessary to extend certain consumer protection requirements to VoIP services, including customer proprietary network information ("CPNI"), "slamming," and "truth-in-billing" requirements. *Notice* ¶¶ 71-72. As the *Notice* seems to recognize, none of these provisions of the Act apply to VoIP now. Nor should they be extended to VoIP. VoIP services are already subject to an extremely broad array

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base of its existing universal service program created under § 254.

[29] *See, e.g.*, AT&T Contribution Reform Comments, at 15-18.

[30] Another way to make the universal service system competitively neutral would be to adopt an assessment base based on all revenues, interstate and intrastate. The Fifth Circuit, however, has rejected a previous Commission attempt to address intrastate matters. *TOPUC* v. *FCC*, 183 F.3d 393, 421-24, 446-48 (5th Cir. 1999).

of federal and state consumer protection statutes, and there is no compelling need to extend any of these additional Communications Act measures to VoIP.

For example, § 258's prohibition on "slamming" does not apply to VoIP, and there is no reason to extend those rules to VoIP. It is extraordinarily difficult to "slam" a VoIP customer, because a VoIP end-user's service is tied to her telephone adapter. A would-be slammer would literally have to install a telephone adapter in an end-user's residence. Slamming is no more a practical threat in the VoIP environment than it is in the ISP industry. VoIP gives the end user absolute control over her service, and this control effectively ends the practice of slamming.

Similarly, the Commission's "truth-in-billing" rules also would not and should not apply. VoIP providers are already subject to a host of federal and state requirements that mandate truthful billing and ban deceptive practices. There is no need to add this extra layer of regulation. Nor should § 214 entry and exit regulation be extended to VoIP. Such regulation is unnecessary, and the threat of burdensome and lengthy proceedings if a VoIP provider chooses to exit the market will deter entry.

Nor do the CPNI requirements of § 222 apply to IP-enabled voice services, because § 222 does not apply to information services. 47 U.S.C. § 222. The Commission's principal concern under § 222, however, has always been the ability of carriers to use calling data to profile their customers and market other services to them. That concern is substantially attenuated in the context of VoIP, because VoIP offerings tend to be complete bundles of all services. Moreover, the Commission can rely on market incentives to ensure that IP service providers use information properly. For its part, AT&T had subjected its AT&T CallVantage service to AT&T's Online Privacy Policy, which provides that AT&T "will not disclose your customer identifiable information to third parties who want to market products to you." Other provisions further

restrict disclosures of individually identifiable customer information.[31] Thus, CPNI protections are not needed to protect consumer privacy for AT&T's VoIP information service.

C. The Commission Should Preempt State Regulation of IP-Enabled Applications That Would Negate Federal Policies.

The *Notice* seeks comment on both the existence and exclusivity of the Commission's jurisdiction over IP-enabled services. *Notice* ¶¶ 38-41. The Commission clearly has jurisdiction over VoIP services (both residential and business services) based on the inherent interstate component of the communications enabled by these services. Moreover, the Commission can and, where appropriate, should assert a strong federal interest in the development of VoIP services that would justify pre-emption of any state regulation of the application layer of IP-enabled services that would have the effect of negating federal rules and policies.

The Commission can unquestionably assert jurisdiction over almost all VoIP services, because those services enable communications that are in substantial part interstate communications. AT&T's business services that incorporate VoIP capabilities are very often designed to facilitate communications between sites in different states, as well as those by users that use the IP-enabled service to initiate a communication from a remote location in one state to business facilities located in another state. AT&T CallVantage service is offered with nationwide calling and advanced call management/forwarding/placing features. Attempting to discern the true geographical endpoints of any permutation of call and/or feature application that

[31] *See* http://www.att.com/privacy. For example, the Online Privacy Policy further provides that "AT&T will not sell, trade, or disclose to third parties any customer identifiable information derived from the registration for or use of an AT&T online service -- including customer names and addresses -- without the consent of the customer (except as required by subpoena, search warrant, or other legal process or in the case of imminent physical harm to the customer or others). When AT&T uses other agents, contractors or companies to perform services on its behalf, AT&T will ensure that the company protects your customer identifiable information consistent with this Policy."

may occur is more complex than any signaling system currently available, let alone in standard industrywide use, might manage. For regulatory purposes, it is impossible to separately address only the interstate communications enabled by the applications, especially in light of the inherently nomadic nature of services. Under the "mixed use" doctrines developed by the Commission and in accord with federal court decisions, federal jurisdiction clearly exists over these services based on the interstate component of the communications generated by these applications.[32]

The affirmative preclusion of state regulation is a separate issue. Although the Commission has recently suggested that in certain circumstances the Commission has exclusive jurisdiction over services it deems interstate,[33] a better approach in this context would be to identify conflicts between federal and state regulation with some particularity and make express preemption findings based upon the harm that state regulation would pose to federal policies. This is particularly warranted because "mixed use" (and untariffed) services and facilities are at issue: although Section 1 of the Communications Act empowers the Commission to regulate services that include interstate communications, without providing that such regulation is exclusive, Section 2(b) still preserves states' authority to regulate intrastate communications. 47 U.S.C. §§ 151 & 152(b).

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[32] *See GTE Telephone Operating Cos*, GTE Tariff No. 1, 13 FCC Rcd. 22466 (1998); *MTS and WATS Market Structure*, 4 FCC Rcd. 5660, n.7 (1989); *see also Louisiana PSC* v. *FCC*, 476 U.S. 355, 360 (1986) ("virtually all telephone plant that is used to provide intrastate service is also used to provide interstate service, and is thus conceivably within the jurisdiction of both state and federal authorities"); *California* v. *FCC*, 39 F.3d 919, 931-32 (9th Cir. 1994); *California* v. *FCC*, 905 F.2d 1217, 1241-43 (9th Cir. 1990); *NARUC* v. *FCC*, 880 F.2d 422, 428-29 (D.C. Cir. 1989); *North Carolina Utils. Comm'n* v. *FCC*, 552 F.2d 1036, 1043 (4th Cir. 1977).

[33] *See* Order, *Petition for a Declaratory Ruling that pulver.com's Free World Dialup is Neither Telecommunications nor a Telecommunications Service*, WC Docket No. 03-45, FCC 04-27, ¶¶16 n.57, 20 (Feb. 14, 2004).

Even within the bounds established by Section 2(b), there is broad scope for pre-emption of state regulation where that regulation "negates the exercise by the FCC" of its lawful powers. *National Ass'n of Regulatory Util. Comm'rs v. FCC*, 880 F.2d 422, 428-29 (D.C. Cir. 1989); *see also, e.g., Louisiana PSC v. FCC*, 476 U.S. 355, 360 (1986); *California v. FCC*, 39 F.3d 919, 931-32 (9th Cir. 1994) ("*California II*"); *California v. FCC*, 905 F.2d 1217, 1241-43 (9th Cir. 1990) ("*California I*"); *North Carolina Utils. Comm'n v. FCC*, 552 F.2d 1036, 1043 (4th Cir. 1977).[34] The Commission is empowered to preempt state regulation to the extent that "it can show that the state regulation negates a valid federal policy" and can do so "to the degree necessary to achieve it." *NARUC*, 880 F.2d at 430-31 (emphasis omitted); *see also California II*, 39 F.3d at 931-32.[35] The Commission's exercise of its express preemption power in such circumstances precludes state regulation that is "inconsistent" or "conflict[ing]" with the "valid federal regulatory objective." *Illinois Bell Tel. Co.* v. *FCC*, 883 F.2d 104, 114-15 (D.C. Cir. 1989); *Michigan Bell Tel. Co. v. MFS Intelenet of Mich., Inc.*, 339 F.3d 428, 434-36 (6th Cir. 2003).[36]

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[34] For these reasons, SBC's argument based on "the inherently interstate nature of IP platform services – and thus of the Commission's exclusive jurisdiction over them," (SBC Pet. at 39; *see id.* at 34-41), is doubly wrong. Even if SBC were correct that most communications over the Internet are interstate, there are still also intrastate communications that give rise to the states' power in the absence of a valid preemption order or conflict between state and federal regulations that negate federal policies. And the Commission's "exclusive" jurisdiction does not exist merely because an interstate communication is at issue, but rather exclusivity exists only when the preconditions for preemption, set out above, are satisfied.

[35] The Commission would bear the burden of meeting this showing. *NARUC*, 880 F.2d at 431; *GTE Tel. Operating Cos.*, 13 FCC Rcd. 22466, ¶ 28 (1998).

[36] These cases also control the scope of preemption of state regulation of the RBOCs' restrictive DSL practices designed to limit local telephone service competition. *See BellSouth Request for Declaratory Ruling that State Commissions May Not Regulate Broadband Internet Access Service by Requiring BellSouth to Provide Wholesale or Retail Broadband Service*, CC Docket No. 03-251 (filed Dec. 9, 2003). Because state regulations designed to bar RBOCs from discontinuing DSL service to customers that choose a competing voice telephone service are

For regulation of IP-based applications, including residential VoIP services, there are very strong interests that would support pre-emption of state regulation that, in fact, has the effect of negating federal policies.[37] As shown above, there is generally no sound basis for economic regulation to apply to these services, and there is a strong federal interest in allowing the services to develop free from harmful regulation. *See* 47 U.S.C. § 230(b)(2) (federal interest in seeking "to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services"); *id.*, § 706. Efforts by states to regulate these services through state control over entry pose a particularly strong and unjustified impediment to the development of VoIP and other IP-enabled applications. *Compare* 47 U.S.C. § 253. Requiring applications providers to qualify as telecommunications carriers and subjecting IP-enabled applications to potentially open-ended state regulation designed for traditional telecommunications services would impose unjustified regulatory burdens on these services and create regulatory uncertainties that would inevitably impede investment and product development. The need for a uniformly deregulatory environment is paramount.

In addition, it is not practically or economically possible to separate the intrastate and interstate components of an IP-PSTN "call" without negating the federal objectives to preserve and promote the viability of the Internet and other interactive computer services. *Pulver.com Order* ¶ 20. It is impossible to determine the geographic endpoints of the IP end of an IP-PSTN

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complementary to federal policies designed to foster local competition and limit market power abuses, such state regulations are valid, are not pre-empted, and could not be pre-empted by the Commission.

[37] In contrast, the network supporting IP-enabled applications continues to present severe risks of market power abuse. *See infra* Section III. State and federal regulation have traditionally complemented one another to address these risks that, here, threaten to impede the development of IP-enabled services and related benefits for consumers. For these reasons, the considerations favoring exclusive federal jurisdiction over IP-enabled applications do not apply at the network level and indeed favor a robust ongoing state role in addressing market power abuses.

call. The IP end of a call has a "portable nature without fixed geographic origination or termination points," which "means that no one but the [end users themselves] know where the endpoints are." *Pulver.com Order* ¶ 21. And just as the Commission noted in the *Pulver.com* decision, even if it were "possible to track the geographic location of packets and isolate traffic for the purpose of ascertaining state jurisdiction over a theoretical intrastate component of an otherwise integrated bit stream, such efforts would be impractical." *Id.* ¶ 24. Tracking packets "to determine their geographic location would involve the installation of systems that are unrelated to providing its service to end users," which "would improve neither service nor efficiency." *Id.* In the *Pulver Declaratory Ruling,* the Commission found that such requirements would be directly contrary to the public interest: "In a dynamic market such as the market for Internet applications . . . , we find that imposing this substantial burden would make little sense and would almost certainly be significant and negative for the development of new and innovative IP services and applications." *Id.* That is equally true here, and the Commission should preempt state entry and rate regulation that would negate the federal interest in promoting the development of VoIP services. *See also* Memorandum Opinion and Order, *GCI* v. *ACS,* 16 FCC Rcd. 2834, ¶ 24 (2001) ("[i]t is well-settled that when communications, such as ISP traffic, are jurisdictionally mixed, containing both interstate and intrastate components, the Commission has authority to regulate such communications").

The inherently nomadic nature of VoIP services and CPE makes patchwork regulation by the states particularly unjustified. The Commission should sustain the conditions for vigorous development of these applications by making specific findings for these services that reaffirm and extend the application of the *Computer Inquiries*' conclusions, which preempted states from applying "common carrier tariff regulation" and "public-utility type regulation" to information

services, to IP-enabled applications. *See* Further Reconsideration Order, *Amendment of Section 64.702 of the Commission's Rules and Regulations (Second Computer Inquiry)*, 88 F.C.C.2d 512, ¶ 83 n.34 (1980).

Slightly different federal interests support a broad and predominantly federal role for oversight of disability access and 911/emergency services. As with economic regulation, there is a strong interest in uniform, national regulation. In this context, the interest in uniformity favors development and adoption of a uniform approach to disability access and 911/emergency services; a patchwork of differing and conflict state regulations would impede the creation of that uniform regulatory regime. Products are developed on a national basis and, as noted above, a single offering may be used in multiple states at once. Conflicting state regulations would impede development and usage of those offerings. For this reason, the Commission should strive to develop a federal standard and approach to these issues (on the bases described above), and should specifically pre-empt state regulations and requirements that undermine uniformity of the resulting federal regulations and regulatory approach in these areas. However, given the controlling preemption standards outlined above, any Commission preemption of state authority is more likely to prevail if the Commission makes specific findings concerning particular state requirements and their effect on the uniform and effective application of specific federal standards or approaches.

Finally, regulatory certainty would foster development and usage of IP-enabled applications, and definitive determinations by the Commission regarding preclusion of state regulation, where appropriate, would assist in establishing that certainty. In certain other contexts, the Commission has noted generally the federal interests that would justify some considerable scope for exclusive federal jurisdiction and preemption of contrary state

regulations, but has left particular preemption determinations to another day. *See* Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, *Review of Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, 18 FCC Rcd. 16978, ¶ 195 (2003) ("*Triennial Review Order*"); *Pulver.com Order* ¶¶ 18, 19 n.70. To the extent that record evidence in this proceeding supports particular findings that preemption of specific types or examples of state regulation, the Commission would increase regulatory certainty and support development of IP-enabled applications by making formal preemption determinations now, rather than deferring the issue to future proceedings.

III. TARGETED REGULATION AT THE FACILITIES LEVEL IS NECESSARY TO ENSURE EFFECTIVE COMPETITION AT THE APPLICATIONS LEVEL.

As the Commission has repeatedly recognized, absent regulation, vibrant retail competition cannot emerge where dominant firms control bottleneck transport "facilities that . . . rivals need to offer their services." *See, e.g., MCI-WorldCom Merger Order*, 13 FCC Rcd. 18025, ¶ 81 (1998); *BT-MCI Merger Order*, 12 FCC Rcd. 15351, ¶¶ 39-40 (1997); *Ameritech Michigan 271 Order*, 12 FCC Rcd. 20543, ¶ 40 (1997). Even where there are multiple providers in a retail market, an entity controlling essential access facilities can exercise power in retail markets by using those facilities to "increas[e] its rivals' costs or by restricting its rivals' output." *LEC Classification Order* ¶ 83; *see also ITTA Forbearance Petition*, 14 FCC Rcd. 10816, ¶ 7 (1999) (incumbent LECs "have the ability and incentive to use their bottleneck facilities to engage in cost misallocation, unlawful discrimination, or a price squeeze against rival interexchange carriers."). As the Commission has recognized, these fundamental economic principles apply not merely to traditional telecommunications services, but information and advanced services as well. *See Computer II*, 77 F.C.C. 2d 384, ¶ 219 (1980) ("The importance of the control of local facilities . . . cannot be overstated. As we evolve into more of an